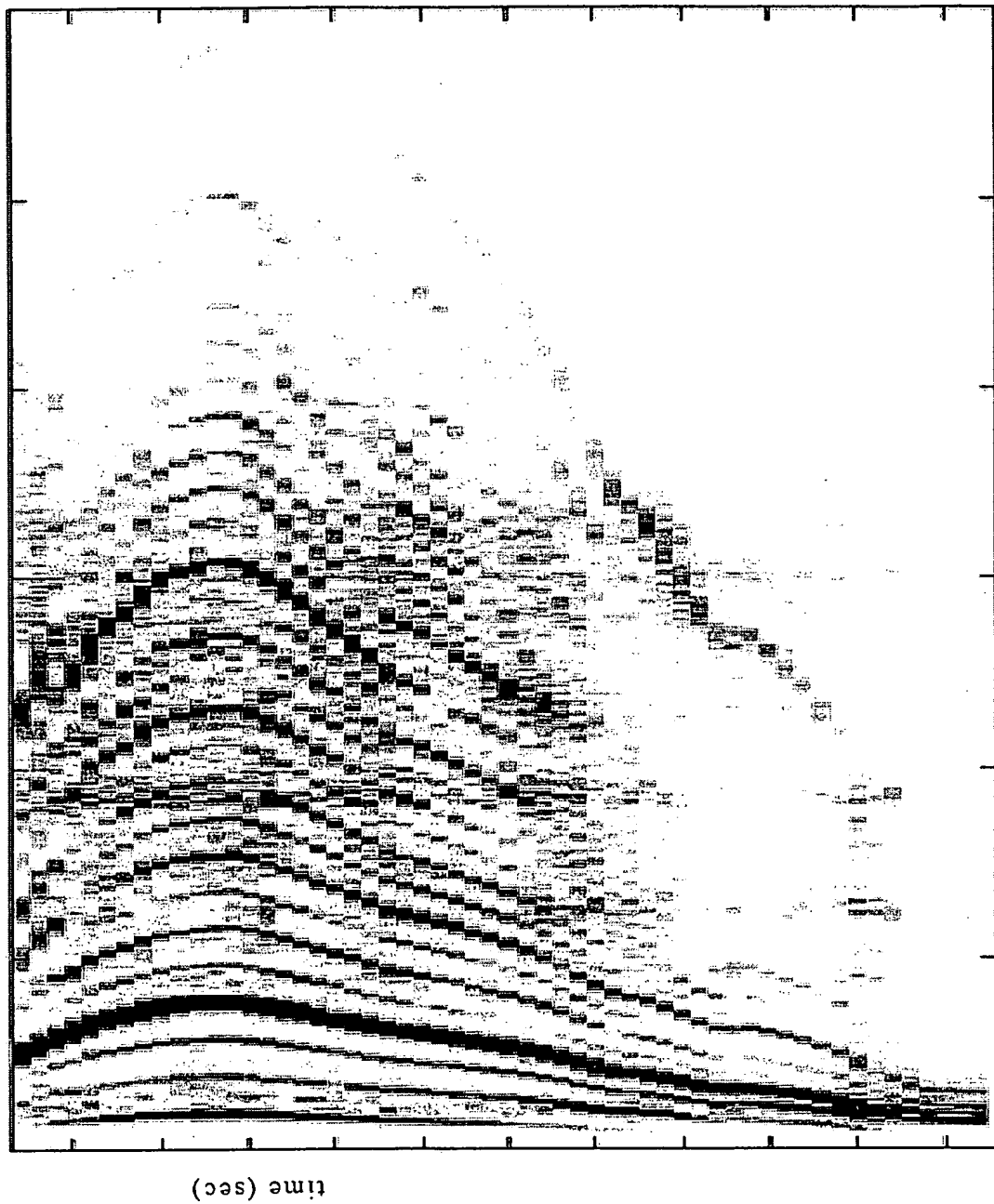


remarks: \*representing hardware apparatus

FIG. 1



frequency (Hz)

FIG. 2

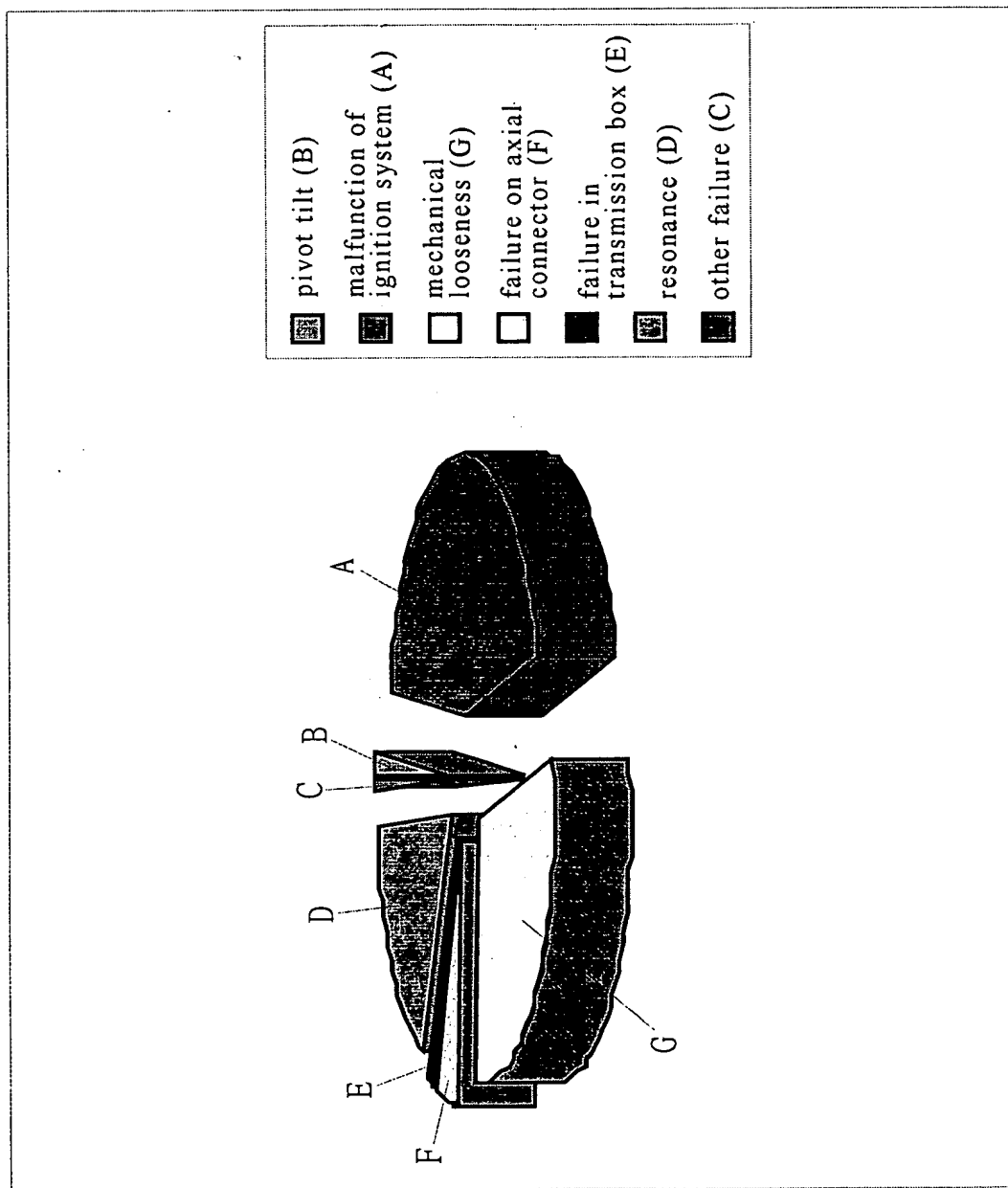
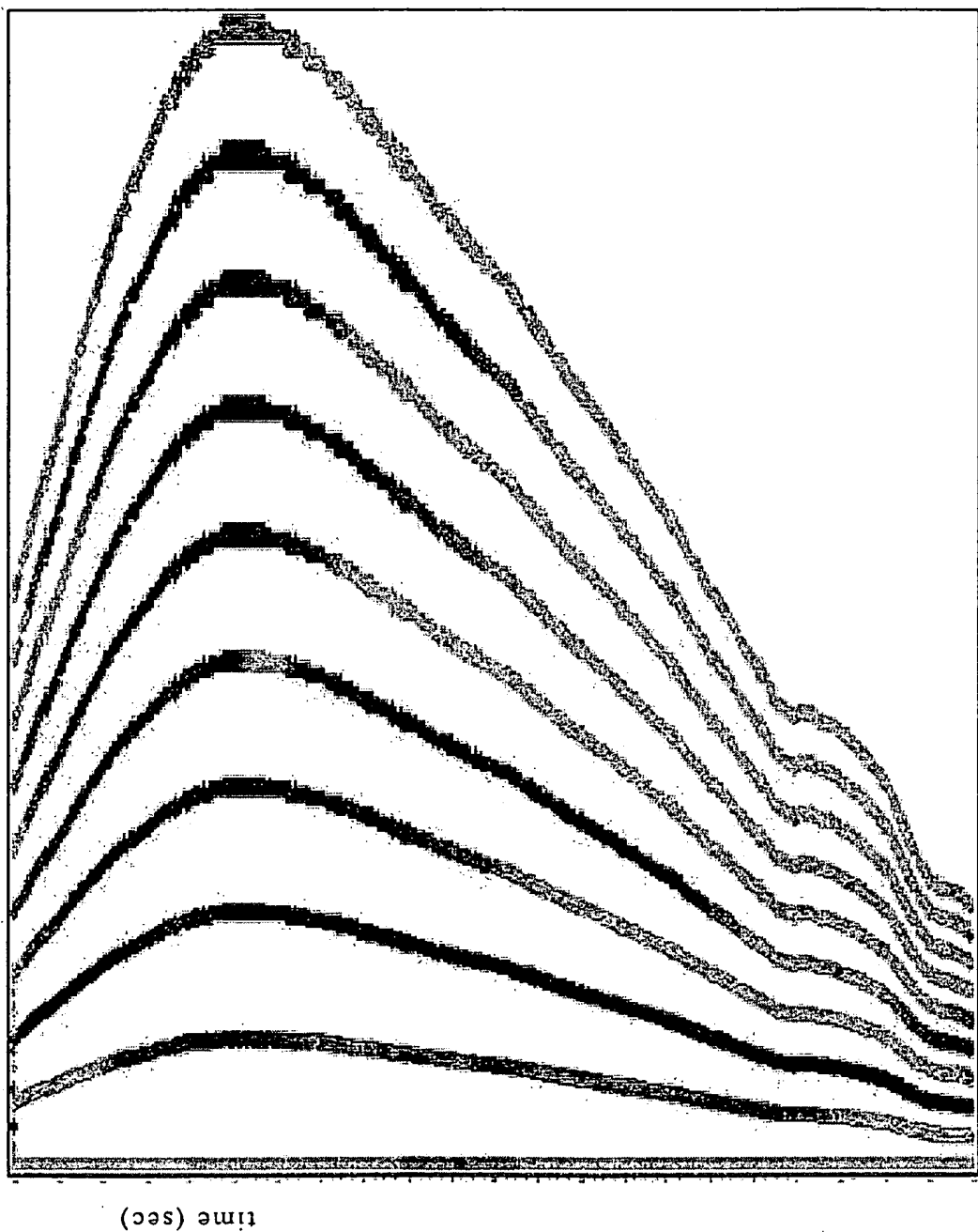
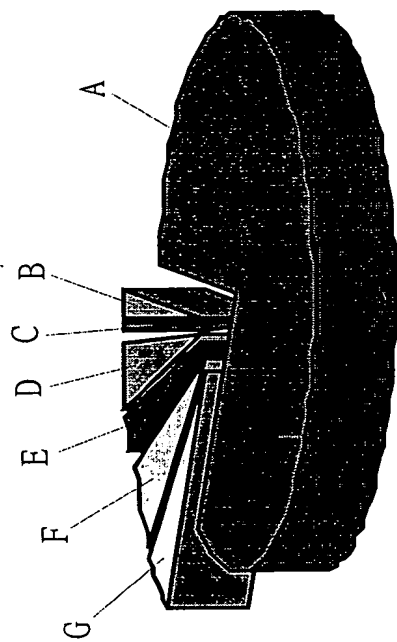


FIG. 3



frequency (Hz)

FIG. 4



- pivot tilt (B)
- malfunction of ignition system (A)
- mechanical looseness (G)
- failure on axial connector (F)
- failure in transmission box (E)
- resonance (D)
- other failure (C)

FIG. 5

Main		RPM Setting		Hardware Setting	
Algorithm		Orders		Bandwidth	
<input checked="" type="radio"/> Kalman Filtering <input type="radio"/> RLS		20		0.50 (order)	
<input type="radio"/> Kalman Filtering <input checked="" type="radio"/> RLS		Q1 0.00000100		Q2 1000000	
<input type="radio"/> Kalman Filtering <input checked="" type="radio"/> RLS		F. Factor 0.9950		e 0.00000100	
<input type="radio"/> Kalman Filtering <input checked="" type="radio"/> RLS		RESULT		START	
<input type="radio"/> Kalman Filtering <input checked="" type="radio"/> RLS		SAVE		Order Analyzer v1.0	

FIG. 6

Main	RPM Setting	Hardware Setting
<b>Curve Fit</b>		
<div><div><div>2</div><div>3</div><div>1</div><div>4</div></div><div><div>1. Without Curve Fit</div><div>2. Spline Curve Fit</div><div>3. Polynomial Curve Fit</div><div>4. Linear Curve Fit</div></div></div>		
<b>Tachometer Setting</b>		
Threshold Limit Value		Number of Reflections
<div>1.50</div> Volt		<div>4</div>
Tacho Signal Smoothing		

FIG. 7

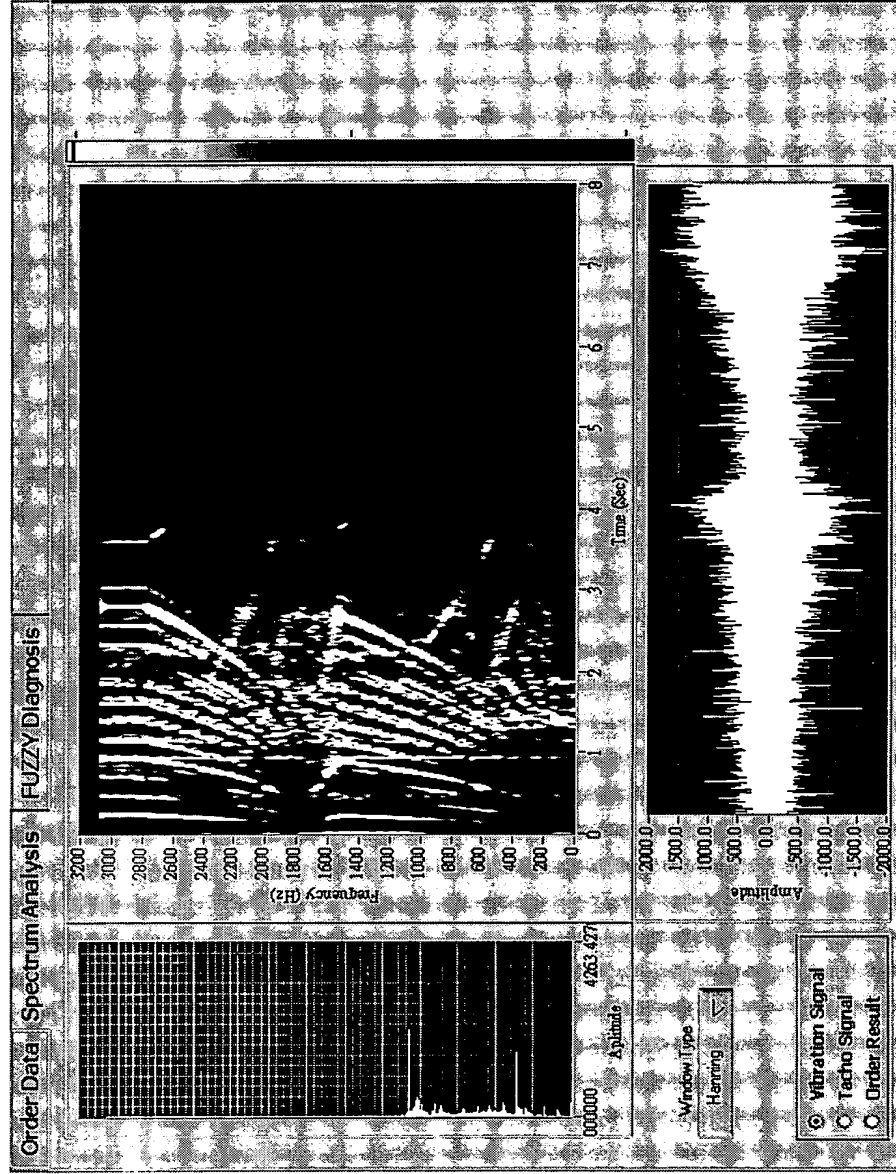


FIG. 8



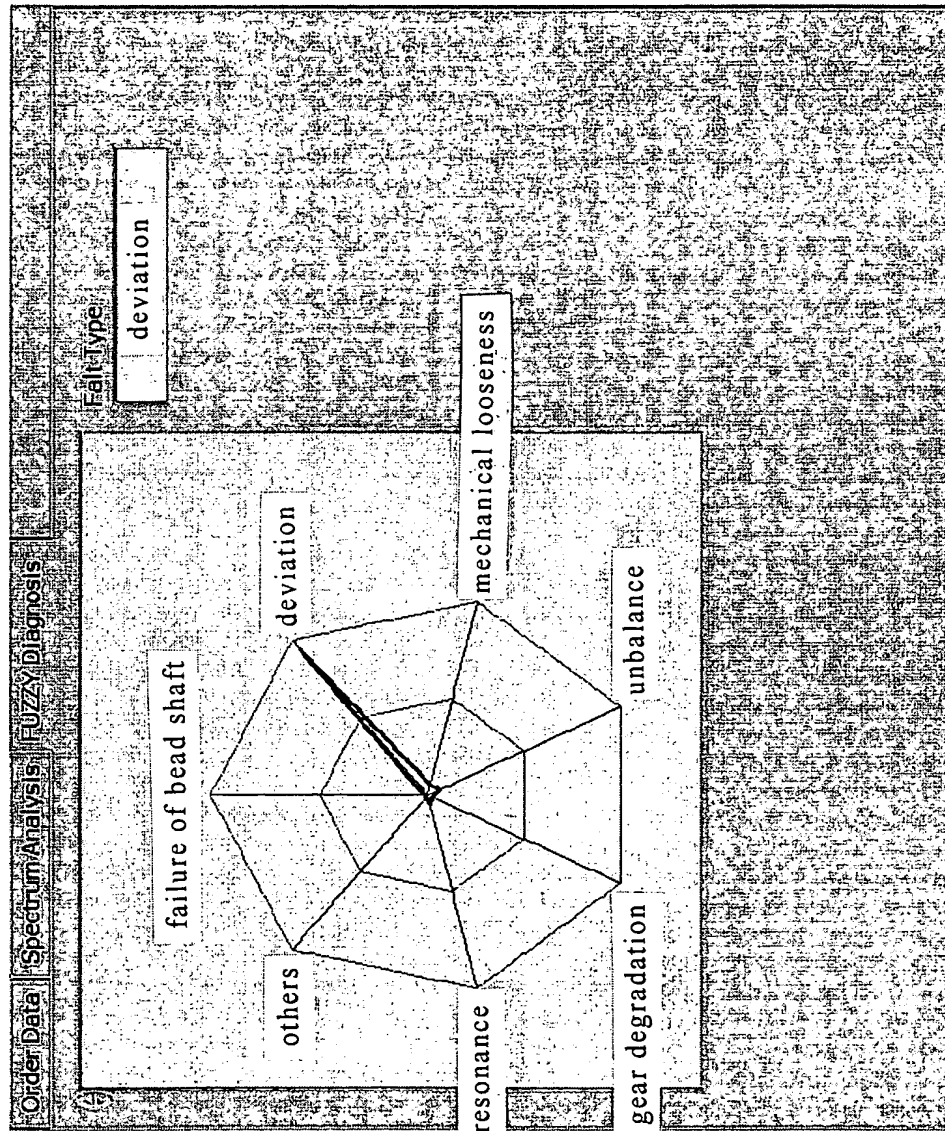


FIG. 9